



# Fourth Quarter Report

October–December 2005



## Hood Canal Bridge Retrofit and East Half Replacement Project

EAST-HALF REPLACEMENT COMPLETION GOAL: 2009  
WEST-HALF RETROFIT COMPLETION: 2010

*Crews construct tower crane rail forms in preparation for pouring concrete, Dec. 29, 2005.*

## MOVING FORWARD

Site preparation efforts at Concrete Tech in Tacoma marked the start of pontoon construction on Hood Canal Bridge replacement project at commercial sites around Puget Sound. Other highlights from this quarter were:

### Construction Progress

This quarter's construction brought the State Route 104 Hood Canal Bridge Project canal site portion of the work closer to completion.

### Public Outreach and Partnerships

The Hood Canal Bridge Communication Team won "Best In-House Campaign Award" in the 2005 Magellan awards communications campaign competition for the Hood Canal Bridge August 2005 Closure Outreach.

Extensive plans were developed to guide community relations, business relations, media relations, web site development,

project reporting and governmental relations during 2006.

### Safety Update

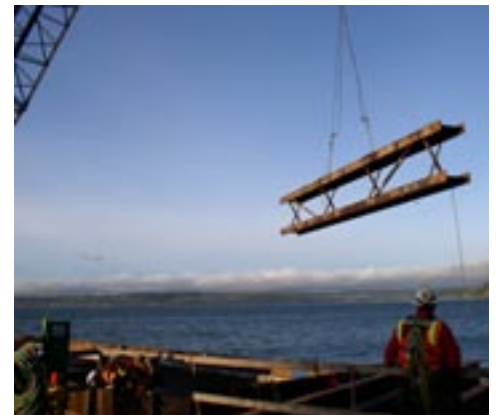
Safety remained paramount for both WSDOT staff and Kiewit-General (K-G). No recordable injuries were reported and there were no lost workdays or restricted days.

### Financial Report

The overall project budget is estimated to be \$471 million, however, the new contract provides a shared savings element that encourages the contractor to seek efficiencies and reduce costs. As of December 31, 2005, \$189 million had been spent.

### Environmental Stewardship

Environmental stewardship remained a focus during project construction. Permit requirements were met at the bridge. WSDOT continued to monitor environmental impacts associated with the project.



### For more detailed information:

Construction Progress .....	Page 2
Public Outreach and Partnerships.....	5
Safety Update.....	6
Financial Report .....	7
Environmental Stewardship.....	8

CONSTRUCTION PROGRESS

WSDOT staff and K-G concentrated on wrapping up the final work at the bridge site during the fourth quarter and on preparing the existing graving dock site in the Tacoma area for pontoon construction.

Project Site Completion Status

Percent Completed as of 12-31-05

East Approach .....	98%
West Approach .....	99%
West-half Roadway Widening .....	98%
Transition Spans and Trusses .....	50%
Pontoon Construction Site Preparation .....	15%

Source: WSDOT Hood Canal Bridge Project Office

BRIDGE SITE

Weather conditions have been challenging but crews were still able to complete a substantial amount of work at the bridge site.



Crane removes north work trestle sections and places them on a barge for removal from the bridge site, Dec. 29, 2005.



Excavator demolishes old pier sections at Hood Canal Bridge site, Dec. 16, 2005.

WEST APPROACH SPAN

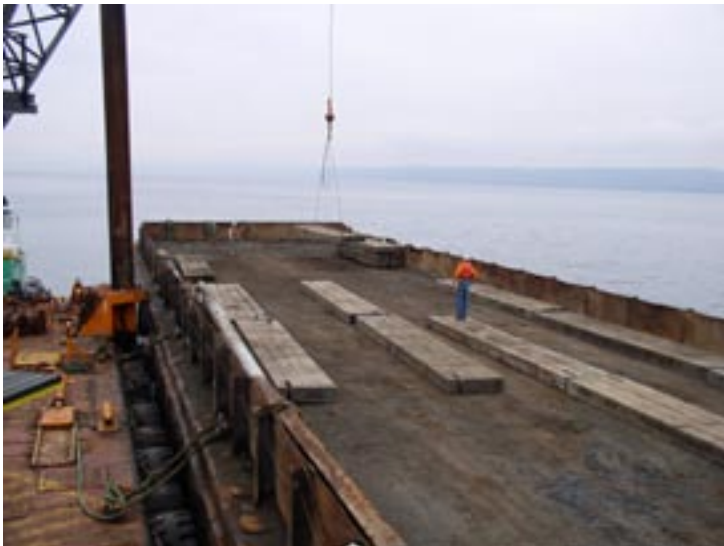
Crews removed north work trestle sections, completed building the embankment near Pier 1, installed drainage systems, placed permanent striping on the roadway, set traffic barrier, removed the temporary south work trestle and put the storm gates in place.



Worker cuts and removes shaft casing from around an old pier, Dec. 5, 2005.



Travelers crossing the Hood Canal Bridge have more room to maneuver, Dec. 29, 2005.



Crews remove wood flooring from a temporary work trestle, Dec. 16, 2005.

## EAST APPROACH SPAN

Crews completed a substantial amount of work between Oct. – Dec. including: old piers 7 and 8 were demolished; a gantry (framework used during pier removal) fabricated; a portion of the concrete cleanup work completed; the embankment near Pier 10 built; drainage systems installed; two precast approach slabs set; final grading, paving, striping and barrier installation for the new east approach roadway completed; electrical work needed to activate storm gates and advanced warning signs completed; and, storm gates placed. In addition, the old approach span removal continued and south work trestle removed started.

WSDOT and K-G are evaluating leaving the north work trestle in place to facilitate work during the east-half bridge replacement.

## WEST-HALF ROADWAY WIDENING (north side):

WSDOT lifted lane restrictions November 23, 2005 on the Hood Canal Bridge when the contractor, K-G, removed the old barrier gate and completed roadway striping. Lane widths increased from 11 feet to 12 feet. West-half roadway shoulders are now 8 feet, providing room for disabled vehicles to pull off the road and to allow traffic to move smoothly around them.

Additional west-half roadway widening work included installing railing, placing compression seals, placing new traffic, barrier gates, and permanent signs and completing concrete finishing work.

## STEEL TRANSITION SPANS AND TRUSSES (east and west)

Work is now focused on assembling all the parts that make up the transition spans and trusses. During this quarter, all the pipe materials needed have been purchased and delivered to Universal Structural, Inc. in Vancouver, WA. The steel girders for the truss sections have been fabricated. In addition, the floor beam sections have been fabricated and are being prepared for assembly.



## EAST-HALF BRIDGE REPLACEMENT

K-G staff began the site preparation work required at Concrete Technology in Tacoma needed to accommodate pontoon construction. Completed work included:

- Shoreline and building permit secured.
- Existing crane footing was demolished and crane rail removal on north side of graving dock.
- Excavation for sheet pile work completed on north side of graving dock.
- Access for pile driving equipment installed and pile driving equipment delivered to begin driving sheet pile.
- Fenced materials staging area north of graving dock.



Concrete Tech staff removes equipment and materials from the graving dock in preparation for pontoon construction, Dec. 5, 2005



Carpenters lay out lumber in preparation for form assembly, Dec. 29, 2005.

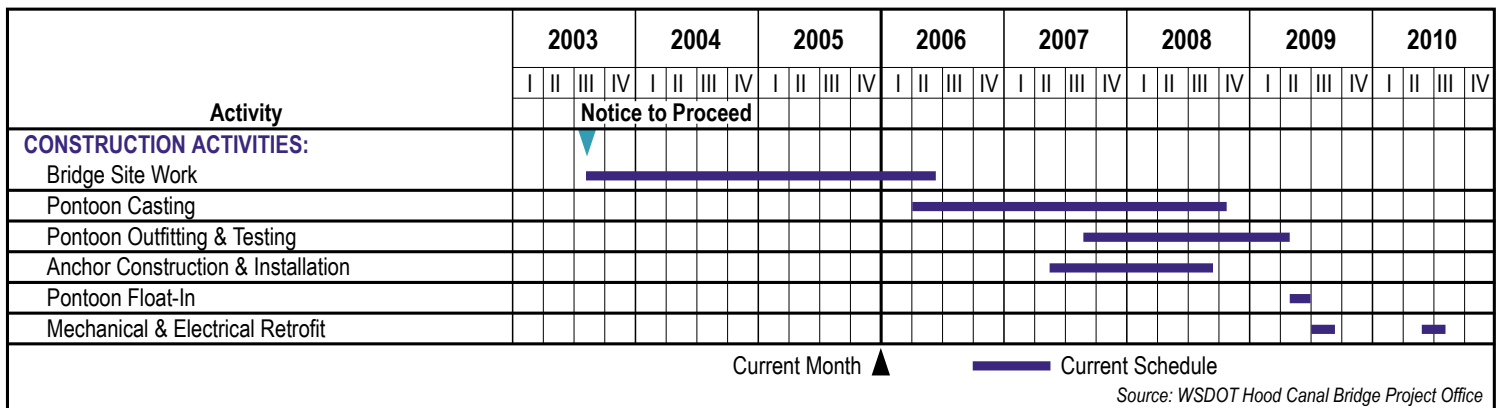


Supplies arrive from Port Angeles. These unused tiebacks will be used to secure sheet pile walls at Concrete Tech, Dec. 20, 2005.



Crews install unused sheet pile walls from Port Angeles on the north side of the Concrete Tech graving dock, Dec. 29, 2005.

## SCHEDULE UPDATE



## PUBLIC OUTREACH, PARTNERSHIPS AND CLOSURE PLANNING

WSDOT won "Best In-House Campaign Award" in the international 2005 Magellan awards communications campaign competition for the Hood Canal Bridge August 2005 Closure Outreach. The campaign material received the highest total score within its competition class and was presented with the Platinum Award.

The Hood Canal Bridge August 2005 Closure Outreach campaign ranked 5th out of the top 50 publicity campaigns of 2005. The top 50 awards are given to the highest-scoring entries regardless of competition class. The campaign received 94 out of 100 points, placing it in among the very best judged.

More than this award, the WSDOT values the community relationships built before and during the closures.

"We know the August 2005 closure went so smoothly because of the Peninsula community. They found ways to inform others about the closures, form partnerships and provide alternate travel options for those who rely on the bridge for their livelihood," said Eric Soderquist, Hood Canal Bridge Project Director. "We will continue to

maintain and build more of these important partnerships to help the community prepare for the closures in 2009."

The Best In-House Campaign category required that in-house staff do more than 50 percent of the work.



Other winners in this category included national and international companies such as Federal Motor Carrier Safety Administration, Boost Mobile, a wholly owned subsidiary of Nextel Corporation and Veolia Environnement.

The 2005 Magellan Awards Communications Campaign Competition, sponsored by the League of American Communications Professionals, drew an unprecedented number of submissions representing a broad range of industries and organizational sizes. More than 475 entries were received from the world's top companies, such as The PGA of America, ESPN, American Airlines, Wells Fargo and Verizon Wireless, so competition was exceptionally tough. For more information, visit [www.lacp.com](http://www.lacp.com).

### 2006 Communication Plan

Extensive plans have been developed to enhance our outreach work including a guide community relations, business relations, media relations, web site development, project reporting and governmental relations during 2006. Elements of this year's plan include:

- New pages on the website, [www.hoodcanalbridge.com](http://www.hoodcanalbridge.com), including project progress photos
- Updated materials available for community presentations
- Open houses to help familiarize the community with the 2009 closure mitigation plan
- Monthly project progress reports which highlight the project's performance

### Communicating the Hood Canal Bridge Project's Performance

*The Hood Canal Bridge team will be reporting on the performance measures for the Hood Canal Bridge project every month.*

*The Hood Canal Bridge Team is striving to:*

- *Deliver the capital improvement program as instructed by the Legislature*
- *Maintain and operate the Hood Canal Bridge cost effectively and safely*
- *Report achievements, shortcomings, and challenges in performance*

*Consistent with these priorities, the Hood Canal Bridge project team is currently defining specific performance measures for the project, centered around:*

- *Project schedule*
- *Financial performance*
- *Safety*
- *Quality*
- *Traffic impacts to the community*

*Performance measures will be based upon data that can be collected quickly and accurately, be independently verified, comply with industry-recognized quality standards and align with WSDOT's strategic initiatives from the "2003 - 2007 WSDOT Business Directions" and the quarterly "Measures, Markers and Milestones Grey Book". The project team will track performance on an ongoing basis, identifying trends and their underlying causes, and making improvements where necessary to achieve desired performance.*

## SAFETY UPDATE

Safety remained paramount for both WSDOT staff and K-G. No lost workdays or restricted days were reported this quarter.

### PERSONNEL SUMMARY

#### October - December 2005

	Hours Worked	Recordable Cases	LWD Cases	Lost Workdays	Restricted Cases	Restricted Days	Fatalities
<b>K-G</b>	27,305	1	0	0	0	0	0
<b>WSDOT</b>	13,682	0	0	0	0	0	0
<b>Total</b>	40,987	0	0	0	0	0	0

No recordable injured were attributed to WSDOT or K-G this quarter.

#### Project To Date

	Hours Worked	Recordable Cases	LWD Cases	Lost Workdays	Restricted Cases	Restricted Days	Fatalities
<b>K-G</b>	390,008	3	0	0	0	0	0
<b>WSDOT</b>	129,181	2	0	0	0	0	0
<b>Total</b>	519,189	5	0	0	0	0	0

The previous injuries attributed to WSDOT during the life of the project included:

- Employee attempted to open a hatch with T-handle wrench, could not get it open and injured their hand by striking it with the wrench. The employee was treated with first aid and returned to work after this activity in order to work safely.
- While cutting brush with a machete, the individual cut himself with the machete and was treated with first aid; no time lost.

The two recordable

became infected. Lost time information was not available for these two recordable cases.

### VEHICLE SUMMARY

#### WSDOT Hood Canal Bridge Project Office Vehicles

	Recordable Cases	LWD Cases	Lost Workdays	Restricted Cases	Restricted Days	Fatalities
<b>2005 Y-T-D</b>	0	0	0	0	0	0
<b>Project To-Date</b>	3	0	0	0	0	0

No recordable vehicle accidents were attributed to WSDOT or K-G for this quarter.

#### Project To Date

The three recordable vehicle accidents were:

- In icy conditions, vehicle slid across oncoming traffic, ended up in ditch. No injuries.
- Vehicle was parked next to dump truck on site. The vehicle's door was open as the dump truck took off. Vehicle's door was ripped off. No injuries.
- Vehicle was stopped at a stoplight behind a semi trailer. Vehicle in next lane rolled forward and hit the front of the truck. No injuries.

## FINANCIAL REPORT

### Project Cost Summary

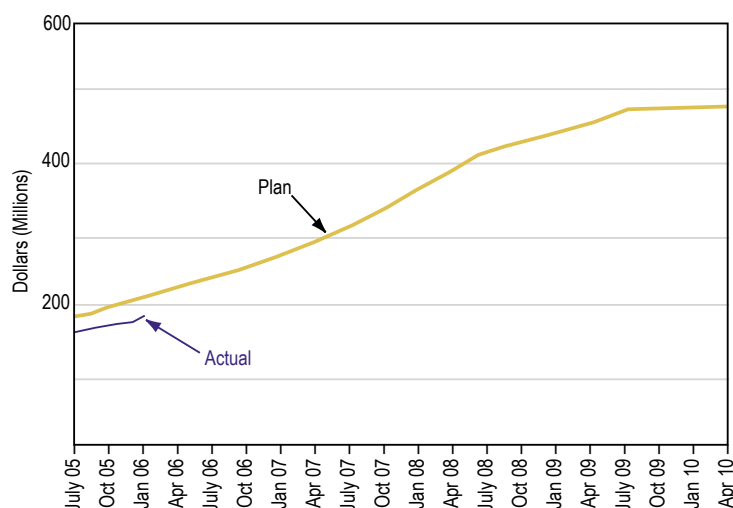
Expenditures as of December 31, 2005 (in millions)

Project Cost Summary	Budgeted	Expended
Past and Current Construction Costs	\$ 206.1	\$ 188.5
Going Forward WSDOT		
Construction Management	\$ 32.0	\$ 0.7
Bridge Closure Mitigation	\$ 9.6	\$ 0.0
New Facilities and Bridge Completion	\$ 220.5	\$ 0.0
Mechanical and Electrical Retrofitting	\$ 2.7	\$ 0.0
<b>Total</b>	<b>\$ 470.9</b>	<b>\$ 189.2</b>

Source: WSDOT Hood Canal Bridge Project Office

### Planned vs. Actual Expenditures

(Total Project Cost)



Source: WSDOT Hood Canal Bridge Project Office

### Construction Costs

Since WSDOT and K-G agreed to a contract change order in October, WSDOT can now answer the most pressing questions concerning project cost. The overall project budget is now estimated to be \$471 million, however, the new contract provides a shared savings element that encourages the contractor to seek efficiencies and reduce costs. The change order costs are \$17 million higher than the 2005 Transportation budget, and that amount is being incorporated in the WSDOT budget proposal for the 2006 legislative session.

The change in budget is categorized into five major cost areas: past and current construction; going forward WSDOT construction management; closure mitigation; new facilities and bridge completion; and, mechanical and electrical retrofitting.

### Outstanding Issues /

#### Potential Impacts to Cost:

- Site location selection for anchors

### Hood Canal Bridge Project: Change in Budget

	February 2005 Budget	October 2005 Budget	Budget Change
<b>Past and Current Construction Costs</b>			
Port Angeles	58,500,000	86,823,000	28,323,000
Bridge Site Work	42,350,000	45,310,000	2,960,000
Work In Progress			
Remaining Archaeology Work	—	2,150,000	2,150,000
Project Design & Engineering	7,800,000	8,850,000	1,050,000
Major Materials for Future Work	41,200,000	61,440,000	20,240,000
Bridge Site Construction Management	19,930,000	9,450,000	(10,480,000)
Anticipated Adjustments	—	(10,950,000)	(10,950,000)
Mitigation Design and Property Acquisition	2,990,000	2,990,000	—
<b>Going Forward WSDOT Construction Management</b>			
Contract Management	—	27,486,000	27,486,000
Project Design and Engineering	—	4,550,000	4,550,000
<b>Bridge Closure Mitigation</b>			
Construction and Plan Implementation	8,760,000	9,644,000	884,000
<b>New Facilities and Bridge Completion*</b>			
Pontoon Construction	49,800,000	109,100,000	59,300,000
Pontoon Outfitting & Testing	14,700,000	48,500,000	33,800,000
Pontoon Float-In	21,000,000	23,000,000	2,000,000
Anchor Construction & Installation	15,000,000	39,900,000	24,900,000
Construction Contingencies	6,460,000	—	(6,460,000)
<b>Mechanical &amp; Electrical Retrofitting*</b>	3,050,000	2,725,000	(325,000)
<b>TOTAL PROJECT</b>	<b>\$ 291,540,000</b>	<b>\$ 470,968,000</b>	<b>\$ 179,428,000</b>

\* The budgets for each item within New Facilities and Bridge Completion and Mechanical & Electrical Retrofitting represent K-G's current estimated cost for this work, including sales tax.



## ENVIRONMENTAL STEWARDSHIP

WSDOT continues to monitor environmental impacts associated with the Hood Canal Bridge Project.

- Battelle Environmental conducted quarterly eelgrass monitoring.
- Kiewit-General and WSDOT monitored pier demolition of the old approach span piers.

The Water Quality Monitoring Plan centers on protecting water quality and marine animals. WSDOT staff carefully tracked pH, turbidity and dissolved oxygen in the water any time there was construction work in the water. During pier demolition, data was collected at least once for each tide cycle (at least three times a day). Analyses of the data showed the extra preventative measures taken by WSDOT and K-G to protect water quality were very successful. There were no reportable violations during the entire quarter.

WSDOT biologists and inspectors carefully monitored the excavated area around each pier during demolition to make sure no marine animals became trapped. As a result of the monitoring, all marine mammals (small feeder fish, squid, shrimp, and crabs) that made their way into the area by the pier were carefully removed and placed in open water.

The pier demolition on the east side of the bridge has been completed and the contractor has begun to remove the southeast work trestle. This work operation along with removing the shaft casings is the last of the in-water work that will be done this year. Inspectors will continue to monitor the site and report on its condition.

- Kiewit-General began restoring the beach on the west side of the bridge.

K-G and WSDOT, in coordination with Washington State Fish and Wildlife, developed a plan that not only restores the beach on the west side, but utilizes recycled project materials in a way that will allow WSDOT to increase the size of the beach.

## LOOKING AHEAD: JANUARY–MARCH 2006

### Bridge Site

West-half roadway widening (north side):

Site work continues as K-G crews install guardrail, remove old approach span piers, complete electrical work, remove work trestles, install compressions seals, install signs and complete concrete cleanup work.

West-half approach span work:

The remaining work includes installing curbs, placing the barrier and guardrail, finishing storm gate installation, completing signing, removing the shaft casings at the bottom of old Piers 1,2 and 3, installing protecting structures around new Pier 3, and putting ladders on Pier 2.

East-half approach span work:

During the next few months, crews will continue with old pier demolition, concrete finish work, sign placement, paving cleanup, beacons, signs and curb installation, electrical work, installation of protecting structures around Pier 4, removal the shaft casings at the bottom of old Piers 4-9, phone line installation and storm gate finish work.

### Pontoon Construction

Preparation work at Concrete Tech will be completed by the end of March. This includes the completion of sheet pile retaining walls to support two tower cranes. These cranes will run on rails along the north and south sides of the graving dock and move materials in and out of the graving dock.

Crews will construct a scale model of a pontoon, fabricate form panels, and start fabricating the rebar needed for first three pontoons to be built (Pa, Pb, and Q).

### Public Information

The communication team will focus on preparing materials needed for 2009 closure mitigation plan community outreach during the first quarter of 2006.



This report highlights updated information regarding the Hood Canal Bridge Project work October–December 2005. Additional information may be obtained from WSDOT's Olympic Region Communications Office at (360) 357-2789.

For more information about the Hood Canal Bridge Project, visit the HCB web site:

**[www.hoodcanalbridge.com](http://www.hoodcanalbridge.com)**.

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